

## PATENT ABSTRACTS OF JAPAN

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(54) PERMANENT MAGNET

(57)Abstract:

PURPOSE: To obtain a remarkable improvement on an iHc while maintaining a high (BH) max in FeBr and FeBRM by a method wherein one or more kinds of Dy, Tb, Gd, Ho, Er, Tm and Yb are contained as R1, wherein heavy rare earth constitutes as a main ingredient as a part of R, in FeBR and FeBRM magnet consisting mainly of light rare-earth such as Nd and Pr as R.

CONSTITUTION: When the sum of rare-earth element R1 and light rare-earth element R2 is worked out as R in FeBR, a magnetic anisotropic sintered permanent magnet consisting in atomic percentage of 0.05W5% R1, 12.5W20% R, 4W20% B, and the remainder Fe. However, one or more kinds of Dy, Tb, Gd, Go, Er, Tm and Yb are to be included in R1, the total of Nd and Pr is to be 80% or more in R2, and the remainder is to be consisted of one or more kinds of rare-earth element containing Y other than R1. Also, when the sum of R1 and R2 is worked out as R in FeBRM, a magnetic

anisotropic sintered magnet, consisting in atomic percentage of 0.05W5% in R1, 12.5W20% in R, 4W20% in B, one or more kinds of added elements M below the prescribed percentage (however, when two or more kinds of added element are contained, M total quantity is less than the atomic percentage of the added element having maximum value) and the remainder of Fe, is used. However, R1 and R2 are the same as above.

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